

METHODS FOR ENHANCING CAPACITORS HAVING ROUGHENED FEATURES TO
INCREASE CHARGE-STORAGE CAPACITY

ABSTRACT OF THE DISCLOSURE

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Structures and methods for making a semiconductor structure are discussed. The semiconductor structure includes a rough surface having protrusions formed from an undoped silicon film. If the semiconductor structure is a capacitor, the protrusions help to increase the capacitance of the capacitor. The semiconductor structure also includes a relatively smooth surface abutting the rough surface, wherein the relatively smooth surface is formed from a polycrystalline material.

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